

### Some corrections in the Family PSELAPHIDÆ.

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Since the time the pathfinder in American entomology, John L. LeConte, described his *Batrisus*, there has been much doubt as what ought to be looked upon as a variety or a true species. We have been under the impression that the described species occupied a territory of considerable extent. *Batrisus nigricans*, owing to a limited amount of material, comprised Northern, Southern, Eastern and Western forms of a similar appearance, though Dr. LeConte expressed in a letter to me his doubts of their identity. After his demise his rather short descriptions were more closely examined, resulting in the conviction that *B. nigricans* was not to be found far to the North and West and our friend Casey described accordingly the differences, which pertain chiefly to the form of the antennæ and the face.

The true *B. nigricans*, collected in Georgia (vertice lævi, leviter oristato frontis apice bidentato retusoque. Antennæ articulo tertio crassiusculo secundo quartoque majore), has a companion in a new form from Long Island, N. Y., but differs in the first antennal joint bearing a sharp thorn perpendicularly, causing the joint to appear triangular (♂), which I have named *B. spinifer*, differing again from *B. denticornis* Casey, by the first joint having the perpendicular tooth blunt and a shielding flat tooth (prolongation) above the insertion of the second joint, which is even longer than the third, and by the form of the clypeus, which is transverse, finely sculptured, while in *B. spinifer* it is long, obtusely conical.

*B. cephalotes* Casey (occurring from East to West along the lakes and adjoining territory), differs from others in having *no* carina on the occiput near the base. Vertex between the foveæ and near the occiput with a faint transverse impression. The frontal margin faintly erect in the middle, profile of clypeus and vertex nearly rectangular. The declivous portion of the frontal margin emarginate, the lobes on each side of the emargination setiferous, the small teeth emerging from the depth of the emargination (in fresh specimens yellow with black shining tips) appear like the teeth of a saw; the clypeal tuber more prominent than in *spinifer*, is small, rounded,

bearing on the upper end next to the subfrontal excavation whisker-shaped tufts of hair; each side of the tuber the clypeal margins are reflexed. The frontal margin in ♂ sulcate in the middle; the pendant produced, lobes each side of the emargination are common to all those species belonging to the "nigricantes" beset with convergent hairs. The first joint of the antennæ in this species is convex below, second larger than third, not transverse as in the ♂ of *B. spinifer*.

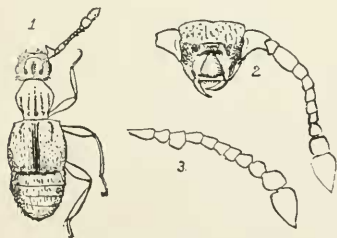
The ♀♀ of *B. cephalotes* and *spinifer* differ in the second joint of the antennæ; the carina on vertex.

I may further add that the reflexed portions of the clypeus are sharp angled and appear by superficial examination as horns, so that with the clypeal tuber the clypeus appears 3-horned, like the clypeus of *B. globosus*.

I find that Casey does not mention the impression on the vertex.

The setigerous punctures Casey mentions I was not able to find on those small teeth in the subfrontal excavation.

**Batrissus spinifer** n. sp.—Shining black, long, densely pubescent. Elytra, marginal rounded angle of the prothorax and supra-antennal tubercle in sunlight blood-red, antennæ, palpi and legs rust-red. Head quadrate, vertex smooth, but little convex, with an entire countersunk fine carina, circumambient sulcus conspicuous, ending posteriorly in round spongy foveæ, twice as distant as either from the eye; lateral margin overhanging the eyes by its sharp carinate edge, punctate, more so the frontal margin, which is in the male narrowly concave in the middle, and divided by a fine impressed line, declivous anteriorly to the inter-antennal line, the lateral part of the declivity beset with long convergent hairs; between these hair pencils emarginate from where two pairs of



1.—*Batrissus spinifer* Br.  
2.—Antennæ of ♂.  
3.—Antennæ ♂ *B. nigricans* Lec.\*

the small triangular teeth are emerging, the outer ones smaller inconspicuous. Subfrontal excavation deep, from the bottom of which a broad, triangular, horizontal tooth stretches out, resting with the acute point on the tips of the clypeal tuberosity, the base of which rests again on the transverse labrum; the cone is just perceptibly higher than broad at the base, and laterally separated by a groove from the lateral expansion (wing) of the clypeus, which is concave, with a retuse angulated margin. The profile of the face resembles somewhat the form of a

\* I have inserted this figure from a sketch made from LeConte's ♂ type (G. H. Horn).

sheep's face. Antennæ ♂ longer than head and prothorax, joint 1 as long as 3, and more than twice as long as 2, triangular, the face angle thornshaped and pendant; 2, transverse just visibly broader than long; 3, little thicker than 2; 4-8, obconical gradually smaller; 8, quadrate; 9, transverse, truncate at base, obconical; 10, larger globose, as thick as the 11th, which is conical as long as the two preceding together, obliquely pointed. In ♀ the frontal margin is interrupted in the middle continuous with the clypeal surface, which is roundly margined anteriorly and the 1st antennal joint convex below; 3, strongly obconical, longer than wide, longer than the 2d or 4th; 10, not as thick as the last joint, which is two and one-half times longer, rounded at base, jointed at tip.

Prothorax as long as wide, median sulcus deep, ending abruptly one-fourth from the neck, which is carinate. Discal crests sharp, interrupted before the small, sharp-pointed tubercles, which are nearer to the base than usual. Lateral sulcus entire, separating the smooth lateral margin, which is nearly horizontal about the arcuate lateral angle where it is broadest, narrowing and declining backward to the lateral shallow fovea. The discal space between the crests and the lateral sulcus is uneven with shallow longitudinal impressions. Between the median basal fovea, through which the median sulcus is prolonged to the base each side and the tubercles, is another longitudinally compressed tooth, prolonged anteriorly into a very short second crest. Elytra not punctured, shoulders high, with a very small spine, dorsal lines faint, very short, basal punctures indistinct, sutural stria not dilated, the sutural impressed lines parallel. Abdomen very convex, the basal depression between the short and prominent carina narrower than the lateral depressions; last ventral in ♂ impressed at the base and the penultimate impressed transversely at the tip; in ♀ last ventral longitudinally rugose at the sides. Legs moderately long, tibiae slightly curvate, the posterior one with a thin process. Length 2. mm.

**Bryaxis canadensis** n. sp.—Piceous-brown or piceous black, pubescence moderately long, recumbent. Elytra sanguineous. Abdomen black. Legs and antennæ ferruginous. Head as long as wide, the eyes excluded, punctured, more strongly at the sides behind the genæ, the latter convergent, little longer than the eyes, feebly areolate; foveæ large, equal in size, the posterior ones mutually three times as distant as either from the eye; antennal tubercles prominent, with a few coarse punctures; frontal margin convex, the space between the antennal tubercles concave, bearing the frontal fovea, and here more conspicuously pubescent; eyes coarsely faceted, for their own length distant from the frontal margin. Antennæ from the first to the eighth joint subcylindrical, decreasing gradually in length and thickness, except the fifth, which is a little longer than its neighbors; the eighth smallest, quadrate. Prothorax brown, uniformly very conspicuously and deeply punctured, one-third broader than long, widest in the middle, where it is strongly areolate, from there to the anterior and basal margin straight; anterior margin one-half the length of the base; middle fovea nude, about double as large as the discal punctures; lateral fovea large, fully visible from above and situated with the anterior margin just behind the middle; the base is garnitured with oblong punctures. Elytra across the shoulders as broad as the prothorax, sides arcuate, diverging, suture one and one-half times as long as the prothorax and three-fourths as long as the width across the tip; disk strongly punctured, all the impressed lines entire, the sutural ones arcuate near the tip and finely punctured, the discal lines convergent toward the tip; basal foveæ three, large, the sutural one farther from the base than the middle one.

Abdomen moderately convex, more feebly punctured, the pubescence as long as on the elytra, first segment as long as one-third its width, the lateral reflexed margin not broader and the lateral basal impression much larger than in *B. rubicunda*, the basal striæ strongly divergent more than half as long as the segment, including at base a space not broader than between the sutural striæ of the elytra; behind the intermediate coxæ on the metasternum is a deep, sharply defined fovea. Legs and antennæ ferruginous, palpi paler. ♂ antennæ longer, elytra less convex, punctuation and pubescence stronger, intermediate tibiæ spurred, first ventral near the posterior margin transversely impressed, last ventral with a somewhat transverse, nearly circular, well defined, but not deep impression. Length 1.5 mm.

From Canada. Differentials are: the strong punctuation, the long, divergent and very appropriate abdominal striæ.

Contrasting the former species, I give here the description of *B. gemmifer* Lec., which was only presented in a synopsis.

**B. gemmifer** Lec.—Ferruginous to red-brown or darker, pubescence very fine and short. Head from base to frontal margin as long as the width across the genæ, impunctate, except on the antennal tubercles, fovea equal in size, small, mutually twice as distant as either from the eye and in a line with them: frontal margin slightly convex, antennal tubercles small, but well defined, space bearing the frontal fovea slightly concave. Eyes longer than the genæ, gemmate; antennæ half as long as the body, second joint as long as the first, not as thick; 3d longer than the 2d, obconical-cylindrical, thinner; 3d to 7th cylindrical, subequal; 8th as thick as the 7th, of equal dimensions; 9th little longer and thicker, obconical; 10th subglobular, larger; 11th nearly double as thick as the 10th, in length equal to the three preceding conjointly, from the middle strongly conical and somewhat obliquely behind the middle, more convex than in *B. rubicunda*; middle foveæ small, deep, conspicuous, lateral ones not larger than the occipital foveæ not fully in view from above and situated one third from the base; disk conspicuously punctulate (magnified 30 diameters); base double as wide as the anterior margin. Elytra across the shoulders wider than the prothorax, sides arcuate behind the middle, where the disk is one-fourth wider than the length of the suture, convex; tip and sides very declivous, posterior margin laterally slightly sinuate; disk (magnified 60 diameters) scarcely perceptibly punctulate, except on the posterior declivity, where it is distinctly punctured; sutural lines convergent from behind the middle to a spinous sharp point on each elytron; discal lines strictly parallel and but slightly convergent near the tip; basal fovea small and near the base. Abdomen not punctured, first segment not longer than one-fourth its width, striæ very short, one-sixth of the length of the segment, very divergent and not further apart than the elytral sutural lines; last ventral punctured. ♂ last ventral inside of a nearly circular space rather flattened, but not impressed. Length 1.3–1.4 mm.

There are varieties in color and the strength of the punctuation of the prothorax and elytra.

This seems to be the most common species in Iowa. It differs from *congener* and *rubicunda* by the punctuation of the prothorax, the

two latter species being impunctate, the abdominal striæ, which are further apart in those two species; *congener* is much smaller, evenly leather-colored and does not occur in the West.

The gemmate appearance of the eyes is caused after death by exsiccation.

When I published the description of *Decarthron cornutum* and *Bryaxis inornata*, I was ignorant as to their relations; afterwards I found them in loving unison. They both differ so much from their supposed genera in every respect that I deemed it necessary to separate them, though the antennæ of *D. cornutum*, the male, show a faint divide between the 4th and 5th joints, which are fairly ankylosed.

#### ANCHYLARTHON n. g.

Differing from *Bryaxis* by the elongate form of the body, the sculpture of the head (♀) having small, lateral foveæ faintly connected by an obsolete circumambient sulcus (in some entirely obliterated) similar to some *Batrisus*, no frontal fovea, globose prothorax without any impression, or but faint indications hardly discernible, the want of discal elytral lines indicated by faint basal impressions, and the ♂ from *Decarthron*, by the elongate form, the sculpture of the head, want of elytral discal lines and the ♂ and ♀ from both named genera by the joints of the antennæ, the last being fusiform as long as the four preceding.

Respecting the mode of living, they differ from all *Bryaxes* by a gregarious life with ants like *Batrisus*, which they resemble in some respects.

*A. cornutum* (*Decarthron*) ♂ Brendel.  
*inornata* (*Bryaxis*) ♀ Brendel.

My *Bythinus carinatus* has two claws and will be separated from the genus *Bythinus* with a new name, if an established genus of a foreign country does not apply.

My *Fustiger* is in every respect an *Articerus*, and must be satisfied with that name.

*Pytina Casey*, is a true *Tyrus*, even *in minutis*.

*Atinus* is, in my opinion, a *Chennium*, which has, according to Aubé, four palpal joints, like all the *Pselaphidæ*, and all are very short and connate. This would perhaps include the new genus *Biotus Casey*.

*Batrisus*, when living, move their abdominal rings by stretching and retraction not unlike the abdominal movements of the Wasps.